

second instructions for printing the web page and each web page associated with the web page on selected levels below the web page;

wherein each web page to be printed is represented in a hash table, and wherein if a given web page appears in the hash table more than once, the given web page is only printed once.

34. (ONCE AMENDED) A computer program product in a computer readable medium for printing web pages, the computer program product comprising:

first instructions, responsive to an input selecting a current web page for printing, for determining whether a maximum depth for printing has been reached;

second instructions for identifying a set of universal resource identifiers located within the current web page in response to the maximum depth being unreached;

third instructions for retrieving the web page identified by the set of uniform resource locators; and

fourth instructions for printing each web page retrieved;

wherein each web page retrieved is represented in a hash table, and wherein if a web page appears more than once in the hash table, said web page is only printed once.

Please add the following Claim 35, which depends from independent Claim 2.

35. The method of Claim 2, wherein web pages selected for printing are represented in a hash table, and wherein if a web page matches an entry in the hash table, that web page is not printed.

REMARKS

Claims 1-34 are pending in the present application. Claim 1 is hereby requested cancelled without prejudice. Claim 35 is added. Claims 2, 8, 16, 19, 25, 33, and 34 are amended to clarify the intended scope of the invention. These changes are not believed to add new matter, and their entry is respectfully requested.

Reconsideration of the amended claims in light of the amendments and following arguments is respectfully requested.

Applicant has amended various claims to include a limitation for preventing the occurrence of a recursive loop in the automatic printing process. It is respectfully asserted that this limitation is not shown in the references cited by the Examiner. If applicant has overlooked a relevant teaching, it is respectfully requested that such teaching be pointed out with particularity.

Claim 2 is shown here for sake of discussion:

2. (ONCE AMENDED) A method in a data processing system for printing web pages, the method comprising the data processing system implemented steps of:

receiving a request to print a web page; and
printing the web page and each web page associated with the web page;
wherein the printing step automatically and individually prints each of a plurality of web pages associated with the web page on selected levels below the web page;
and wherein if a first web page of the plurality appears more than once among the plurality, said first web page is only printed once.

The Brobst reference appears to show that multiple web pages can be combined into a single conglomerate web page for printing as a single document. [See, e.g., Brobst, col. 3, line 66-col. 4, line 11.] However, Brobst does not appear to teach that web pages which appear more than once among the set of associated web pages are printed only once, nor does Brobst teach a mechanism for incorporating such functionality.

Such functionality is shown in the present specification at page 15, line 15, to page 16, line 6, which states:

Level 2 contains Web pages 624-632. Web page 624 is accessed using link 614 in Web page 608. Web page 626 is accessed using link 616 in Web page 608. Web pages 628 and 630 are accessed using links 618 and 620 in Web page 610.

Web page 632 is accessed using link 622 in Web page 612. Web pages 624, 626, and 632 contain links 634-642. The pages associated with these links are not retrieved because they are located on a level lower than the one specified by the user. Also, in this example, Web page 632 contains a link returning to a previous level. In particular, link 640 in this example is tied to link 604 in Web page 600. The mechanism of the present invention does not process the link such that a recursive loop occurs. The tracking of prior paths may be performed in a number of ways. For example, all links that have been selected for printing may be stored in a hash table in which each entry contains a URL and a file name. If the mechanism of the present invention identifies a link that matches an entry into hash table, this link is not retrieved or printed. The prior path is identified and remains unfollowed.

[Present application, page 15 line 15-page 16 line 6.]

This passage depicts a situation wherein automatic grouping of web pages based on their appearance on "lower levels" beneath a web page can result in a recursive loop which will cause repeated printing of the page. There does not appear to be any teaching in Brobst of preventing or alleviating this situation. Therefore, independent Claims 2, 8, 16, 19, 25, 33, and 34 are believed patentable, as well as the claims which depend therefrom.

In rejecting Claim 16, the Examiner also cites Narayanaswami (UK patent no. 2,332, 543) as teaching that "a user is able to select from a listing of the hyperlinks available on a target page for subsequent print selection such as print current page, print to level, print designated selections, and print 'All But' selection (Abstract; page 12 lines 7-46)." [See Office Action of 5/31/02.]

However, the cited passages of Narayanaswami do not appear to teach alleviation of situations wherein selection of web pages for printing results in redundant printing. If applicant has overlooked a relevant teaching, it is respectfully requested that such teaching be pointed out with particularity.

It is respectfully believed that all claims, as amended, are patentable over the cited references. Allowance of the claims is respectfully requested.

Conclusion

It is respectfully urged that the subject application is patentable over Brobst et al., and Brobst et al. in view of Dubbels et al., and Brobst in view of Narayanaswami et al., and is now in condition for allowance.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: _____

Respectfully submitted,

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REDACTED CLAIMS

[Cancel Claim 1 without prejudice.]

2. (ONCE AMENDED) [The method of Claim 1,] A method in a data processing system for printing web pages, the method comprising the data processing system implemented steps of:

receiving a request to print a web page; and

printing the web page and each web page associated with the web page;

wherein the printing step automatically and individually prints each of a plurality of web pages associated with the web page on selected levels below the web page; and wherein if a first web page of the plurality appears more than once among the plurality, said first web page is only printed once. [prints the Web page in each Web page associated with the Web page on selected levels below the Web page.]

8. (ONCE AMENDED) A method in a data processing system for printing web pages, the method comprising the data processing system implemented steps of:

responsive to an input selecting a current web page for printing, determining whether a maximum depth for printing has been reached;

identifying a set of universal resource identifiers located within the current web page in response to the maximum depth being unreached;

retrieving the web page identified by the set of uniform resource locators; and printing each web page retrieved;

wherein each web page retrieved is represented in a hash table, and wherein if a web page appears more than once in the hash table, said web page is only printed once.

16. (ONCE AMENDED) A method for printing items comprising the data processing system implemented steps of:

receiving a request to print a current item, wherein additional items are associated with the current item in relationship in which the additional items are on levels below the current item;

printing the current item;
determining whether additional items on levels below the current item are to be printed; and
responsive to a determination that additional items are to be printed, printing the additional items;
wherein if a first item appears more than once among the additional items, the first item is only printed once.

19. (ONCE AMENDED) A data processing system for printing web pages, the data processing system comprising:

receiving means for receiving a request to print a web page; and
printing means for printing the web page; [and each web page associated with the web page on selected levels below the web page]
wherein the printing means automatically and individually prints each of a plurality of web pages associated with the web page on selected levels below the web page; and wherein if a first web page of the plurality appears more than once among the plurality, said first web page is only printed once.

25. (ONCE AMENDED) A data processing system for printing web pages, the data processing system comprising:

determining means, responsive to an input selecting a current web page for printing, for determining whether a maximum depth for printing has been reached;

identifying means for identifying a set of universal resource identifiers located within the current web page in response to the maximum depth being unreached;

retrieving means for retrieving the web page identified by the set of uniform resource locators; and

printing means for printing each web page retrieved;
wherein each web page retrieved is represented in a hash table, and wherein if a web page appears more than once in the hash table, said web page is only printed once.

33. (ONCE AMENDED) A computer program product in a computer readable medium for printing web pages, the computer program product comprising:

first instructions for receiving a request to print a web page; and

second instructions for printing the web page and each web page associated with the web page on selected levels below the web page;

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fourth instructions for printing each web page retrieved;

wherein each web page retrieved is represented in a hash table, and wherein if a web page appears more than once in the hash table, said web page is only printed once.

[Add the following claim which depends from Claim 2:]

35. The method of Claim 2, wherein web pages selected for printing are represented in a hash table, and wherein if a web page matches an entry in the hash table, that web page is not printed.